



FIGURE 6  
 OVERALL TREATMENT AND LAND APPLICATION FACILITY  
 FOR  
 CITY OF KUNA

WASTEWATER LAND APPLICATION PERMIT MODIFICATION

CIVIL SURVEY CONSULTANTS, INC.  
 100 S. ADAMS WAY  
 SUITE 101  
 MERIDIAN, IDAHO 83642

**E. Environmental Monitoring Serial Numbers**  
**Computerized Data Reporting Serial Number Key**

| <b>HYDRAULIC MANAGEMENT UNITS</b>                       |              |                   |
|---|--------------|-------------------|
| <b>Description</b>                                      | <b>Acres</b> | <b>Serial No.</b> |
| Field 1, 132-acre site                                  | 132          | MU-006002         |
| Field 2, 54-acre site, north field, west of pond system | 54           | MU-006004         |
| Field 3, 61-acre site, south field, west of pond system | 61           | MU-006005         |
| Field 4, 33-acre site, south of pond system             | 33           | MU-006006         |
| Field 5, 40-acre site, south of field 3 and 4           | 40           | MU-006007         |
| Field 6, 38-acre site, south of field 4                 | 38           | MU-006008         |
| Field 7, 38-acre site, south of field 6                 | 38           | MU-006009         |

Note: MU-006003 intentionally not used

| <b>WASTEWATER SAMPLING POINTS</b>  |                   |
|--|-------------------|
| <b>Description</b>   | <b>Serial No.</b> |
| Discharge point of wastewater to land application, existing 2001         | WW-006001         |
| Discharge point of wastewater to land application, future (if necessary) | WW-006002         |

| <b>LAGOONS</b>                   |                   |
|----------------------------------|-------------------|
| <b>Description</b>               | <b>Serial No.</b> |
| Aerated Lagoon No. 1             | LG-006001         |
| Facultative/Storage Lagoon No. 2 | LG-006002         |
| Facultative/Storage Lagoon No. 3 | LG-006003         |
| Facultative/Storage Lagoon No. 4 | LG-006004         |
| Facultative/Storage Lagoon No. 5 | LG-006005         |
| Facultative/Storage Lagoon No. 6 | LG-006006         |
| Future lagoon                    | LG-006007         |
| Future lagoon                    | LG-006008         |
| Future lagoon                    | LG-006009         |
| Future lagoon                    | LG-006010         |

**E. Environmental Monitoring Serial Numbers**  
**Computerized Data Reporting Serial Number Key**

| <b>SOIL MONITORING UNITS</b> |                                  |                   |
|------------------------------|----------------------------------|-------------------|
| <b>Description</b>           | <b>Associated Hydraulic Unit</b> | <b>Serial No.</b> |
| Field 1, 132-acre site       | MU-006002                        | SU-006003         |
| Field 2, 54-acre site        | MU-006004                        | SU-006004         |
| Field 3, 61-acre site        | MU-006005                        | SU-006005         |
| Field 4, 33-acre site        | MU-006006                        | SU-006006         |
| Field 5, 40-acre site        | MU-006007                        | SU-006007         |
| Field 6, 38-acre site        | MU-006008                        | SU-006008         |
| Field 7, 38-acre site        | MU-006009                        | SU-006009         |

| <b>GROUND WATER MONITORING POINTS</b> |                   |
|---------------------------------------|-------------------|
| <b>Description</b>                    | <b>Serial No.</b> |
| Process Water Well                    | GW-006003         |

**F. Reference Documents Incorporated or to be Incorporated into the Permit**

1. Operation and Maintenance Manual (Plan of Operation), refer to Section L, no. 1
2. Land Application Site Operator Lease
3. Waste Solids Management Plan

## G. Compliance Schedule for Required Activities

The Activities in the following table shall be completed on or before the Completion Date unless modified by the DEQ in writing.

| <b>Compliance Activity<br/>Number<br/>Completion Date</b> | <b>Compliance Activity Description</b>  |
|---|---|
| <b>CA-060-01</b><br>As specified                          | The Noble domestic well shall be abandoned in accordance with applicable regulatory requirements prior to wastewater land application on the site of the well.  |
| <b>CA-060-02</b><br>March 31, 2002                        | Submit a draft copy of the lease with the system operator to DEQ for review and comment.<br><br>The final signed lease, approved by DEQ, shall be incorporated by reference into this permit and shall be enforceable as a part of this permit.     |
| <b>CA-060-03</b><br>As specified                          | Plans and specifications shall be submitted to DEQ for review and approval prior to construction of all wastewater treatment facilities, including wastewater irrigation delivery facilities.   |
| <b>CA-060-04</b><br>As specified                          | Prior to utilizing any portion of the feed lot area (identified in Figure 6) for land application, the permittee shall obtain written DEQ approval. DEQ will use soil nutrient levels to determine when this area is suitable for land application. |
| <b>CA-060-05</b><br>As specified                          | Submit a Waste Solids Management Plan to DEQ for review and approval for all waste solids, including the management of solids located at the feed lot area. The Plan shall address how the requirements of section L, No. 6 will be satisfied.      |

## H. Special Conditions

The following Special Conditions are additions and/or modifications to the Standard Conditions and Limits in this permit. The individual Special Conditions will state which Standard Condition or Limit is to be modified, and what that modification is. Additions will simply state what the addition is.

1. Modification: Section I. Standard Permit Limits and Conditions, Application Season, page 10  
**The Growing Season for this permit is March 1 through October 31, 245 days**
2. Addition: Section I. Standard Permit Limits and Conditions, Non-Growing Season (NGS) Hydraulic Allowance  
**NGS hydraulic application rate of up to 4.74 inches or 17 million gallons is allowed during the NGS (November 1 through the end of February) on Field 1 (MU-0006002, 132 acres). No NGS application is allowed on any other fields.**
3. Addition: Section I. Standard Permit Limits and Conditions, Fencing Requirements  
**Fencing shall be provided around the wastewater treatment facilities and land application areas.**
4. Addition: Section I. Standard Permit Limits and Conditions, Lagoon Seepage Rate Testing  
**Each wastewater lagoon shall be tested for seepage rates at a minimum frequency of every 5 years and test results shall be submitted to DEQ.**
5. Modification: Section I. Standard Permit Limits and Conditions, Buffer Zone Distances, page 11  
**The disinfection level of 23/100 ml and the associated monitoring requirements will apply in this permit. The public access buffer zone shall apply to public roads only. All other buffer zones for this category shall apply.**
6. Addition: Section J. Standard Monitoring Requirements  
**Measure and report the volume of supplemental irrigation water applied to each Hydraulic Management Unit in Gallons/Month and acre-inches/month.**
7. Addition: Section J. Standard Monitoring Requirements  
**The Process Water Well shall be sampled on an annual basis in July for the following parameters: Total Dissolved Solids, chloride, and fecal coliform**
8. Modification: Section K. Reporting Requirements, page 14  
**The reporting period for the annual report is modified to reflect the growing and non-growing seasons. The annual report period shall cover the previous reporting year from November 1 through October 31. The due date of the report shall remain January 31 of the following year.**

## I. Standard Permit Limits and Conditions

- 1) The Permittee is allowed to apply wastewater and treat it on a land application site as prescribed in the tables below and in accordance with all other applicable permit conditions and schedules.
- 2) See also Special Conditions.

| Category   | Permitted Limits and Conditions  |
|--|--|
| <b>Type of Wastewater</b>  | Municipal Wastewater   |
| <b>Application Site Area</b>   | Slow Rate Irrigation   |
| <b>Application Season</b>  | Growing Season only, May 1 - October 31  |
| <b>Maximum Hydraulic Loading Rate, Growing Season (includes wastewater and supplemental irrigation water, if used)</b> | <p>Growing Season (GS) Hydraulic Loading Rate shall be no greater than the Irrigation Water Requirement (IWR) using data from the tables of the following University Of Idaho web site: <a href="http://www.kimberly.uidaho.edu/water/appndxet/index.shtml">http://www.kimberly.uidaho.edu/water/appndxet/index.shtml</a>. IWR is equal to the Mean IR data from these tables divided by the irrigation system efficiency. The numbers in these tables need to be converted to inches.</p> <p>In lieu of these tables, current climatic and evaporation data, or 30-year average data may be used to calculate the IWR, as defined in the 1994 Technical Interpretive Supplement, pages IV-6 and IV-7. Assume no carryover soil moisture and a leaching rate of zero in calculating the IWR.</p> <p>Application shall generally follow consumptive use rates for the crop throughout the season.</p> |
| <b>Down gradient ground water</b>  | Ground Water Quality shall be in compliance with <i>Idaho Ground Water Quality Rule</i> IDAPA 58.01.11   |
| <b>COD application rate</b>  | 50 pounds/acre/day (Seasonal average)  |
| <b>Maximum Nitrogen Application Rate – from all sources</b>  | 125% of crop uptake, or UI Fertility Guide   |
| <b>Maximum Phosphorus Application Rate – from all sources</b>  | 125% of crop uptake, or UI Fertility Guide   |
| <b>Grazing</b>   | Grazing is allowed only in conformance with DEQ approved grazing management plan.  |
| <b>Allowable crops</b>   | Crops grown for direct human consumption are not allowed   |
| <b>Signing</b>   | Signs shall be posted every 500 feet designating the fields as wastewater reuse areas or equivalent  |

## I. Standard Permit Limits and Conditions

| <b>Buffer Zone Distances, feet (based on sprinkler irrigation)</b> | <b>Disinfection Level* (total coliform)</b> | <b>Distance to Public Access</b> | <b>Distances to Inhabited Dwellings</b> | <b>Distance to streams</b> | <b>Distance to private Water Sources</b> | <b>Distance to public water sources</b> | <b>Single sample maximum total coliform level</b> |
|--|---|----------------------------------|---|----------------------------|--|---|---|
|  | 2.2 /100 ml                                 | 0                                | 100                                     | 50                         | 500                                      | 1,000                                   | 23/100 ml   |
|  | 23/100 ml                                   | 50                               | 300                                     | 50                         | 500                                      | 1,000                                   | 240/100ml   |
|  | 230/100ml                                   | 300                              | 1,000                                   | 50                         | 500                                      | 1,000                                   | 2400/100ml  |

\*Compliance determination method for disinfection requirements is as follows:

- For determining compliance with the 2.2/100 ml disinfection level, the median value of the last five (5) results must not exceed 2.2/100 ml. In addition, no single sample value shall exceed 23/100 ml.
- For determining compliance with the 23/100 ml disinfection level, the median value of the last five (5) results must not exceed 23/100 ml. In addition, no single sample value shall exceed 240/100 ml.
- For determining compliance with the 230/100 ml disinfection level, the median value of the last three (3) results must not exceed 230/100 ml. In addition, no single sample value shall exceed 2400/100 ml.